

MMTO Technical Memoranda

1975 - 1980

- 75-1 AZ Bearing and Servo Control Tests
C. Janes
- 79-1 Intensity Rings in Out-of-Focus MMT Star Images
J.M. Beckers, J.T. Williams
- 80-1 Results of May 5, 1980 Active Optics Test Run
J.M. Beckers, J. Robinson
- 80-2 Astigmatism in Guide Alignment Telescope
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- 80-3 Internal Seeing in the MMT and its Effect on the Laser Coalignment System
J.M. Beckers, F. Burnette, J. Robinson
- 80-4 Thermal Gradients in MMT Chamber
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- 80-5 Wind-Induced Mount Tracking Errors
B.L. Ulich
- 80-6 MMT Polarization Properties
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- 80-7 New Data on Stellar Densities
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- 81-1 Radiation Cooling of MMT Optical Support Structure and Building, Possible Solutions
J.M. Beckers, B.L. Ulich
- 81-2 Report on Engineering Tests at the MMT
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- 81-3 An Engineering Demonstration of A Telescope Coalignment System
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- 81-4 Dimensional Stability of Top Box Image Viewing System
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- 81-5 Performance of Top Box Optics
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 - 81-6 Use of Grinnell Leaky Memory to Reduce Seeing Aliasing in Rapid Guiding
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 - 81-7 Implementation and Initial Tests of an Open-Loop Telescope Coalignment System
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 - 81-8 Test of Fairchild CCD Camera in MMT Focal Plane -- Telescope Aberrations and Ultimate MMT Image Quality
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 - 81-9 Test of Total Internal Reflection Prism
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 - 81-10 Light Scattering in the MMT
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 - 81-11 Surface Quality of MMT Beam Combiner
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 - 81-12 Optimizing Image Quality in One MMT Telescope
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 - 81-13 New Instrument Rotator Software
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- 82-1 Mount Control Equations
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- 82-2 Progress Report on Mount Pointing and Tracking
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- 82-3 Passive and Open-Loop Coalignment of the MMT
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- 82-4 New Mount Control Software
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- 82-5 T.C.S. Open-Loop/Auto-Stacking Software
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- 82-6 Mount Tracking Errors at Various Tracking Rates Using the MMT Mount Computer Parallel Interface and Parallel Software
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- 82-7 New TCS Program
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- 82-8 Ultimate Performance Goals for MMT
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- 82-9 Interim Report on MMT Seeing Tests
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- 82-10 Mount Control Software Summary
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- 82-11 Using the Data General 8020 Floating Point Boards with the POINT 4 Mark VIII Computer
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- 82-12 Update MMT Seeing Statistics
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- 82-13 The Use of Hose Clamps to Hold MMT Tertiary Mirrors
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- 82-14 Beamcombiner X and Y Stages
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- 82-15 Emissivity of the Multiple Mirror Telescope
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- 82-16 Plans for Improvement of MMT Throughput
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- 82-17 Tests of Three New Tertiary Mirror
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- 82-18 Specifications for MMT Primary Mirror Performance
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- 82-19 Pathlength Adjustments in MMT on the Basis of the October 1, 1982 Measurements
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- 82-20 Combining the 6 MMT Beams Coherently with Minimum Amount of Effort
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82-21 Mount Control Servo Algorithm (Revised, see 83-5 & 83-12)
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83-1 Image Stacking and Guiding Accuracy
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83-2 MMT Integrating Digital TV and Its Limiting Magnitude
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83-3 MMT Mount Computer/SAE Diagnostic Modem Link
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83-4 Test of MMT Phasing
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83-6 Emissivity of MMT
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83-7 Tracking the Space Shuttle from June 20-23
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83-9 A New Scheme to Coalign and Cophase a MMT Type Telescope
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83-11 TCS Grinnell Overlay and 16 Bit Deep Integration Capability
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- 83-14 Level Output Bits for Diagnostics
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- 83-15 Fringe Contrast Measurements for Telescope Phasing
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- 84-1 Open-Loop Flexure Coefficients for MMT Phasing
J.M. Beckers, E.K. Hege
- 84-2 Effects of Wind Loading on Telescope Pointing
E.K. Hege, J.M. Beckers
- 84-3 Evaluation of TCS Autostacking Routine During Engineering Run - January 3, 1984
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- 84-4 MMT TCS Evaluation - December 10-13, 1983
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- 84-5 New Procedure to Update Flexure Coefficients
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- 84-6 Test of Second MMT Beamcombiner
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- 84-7 Correcting Periodic Error in Telescope Absolute Encoders
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- 84-8 The MMTO Top Box
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- 84-9 More on Open-Loop Flexure Curves for MMT Phasing
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- 84-10 Abridged I-Ret Software Guide
F.H. Chaffee, Jr., D.K. Gilmore, D.B. Ouellette, D. Iadevaia
- 84-11 Control Room Consoles
C. Heller, C. Janes, J. McAfee, J. Robertson
- 84-12 Chiller System Controls
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- 84-13 Brake/Drive Sequencing
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- 84-14 Pre-Limit/Emergency Stop of Telescope Drives
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- 84-15 Tertiary Mirror Mounts
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- 84-16 MMT Video Distribution System
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- 84-17 Correcting Periodic Error in Telescope Absolute Encoders
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- 84-18 Operational Periodic Error Corrections
A.D. Poyner, J.W. Montgomery
- 84-19 Simplified Precession Routine for the Mount Computer
A.D. Poyner
- 84-20 Observing Catalog Preparation Guide
C.B. Foltz, F.H. Chaffee, Jr.
- 84-21 Review of Communication Requirements at MMTO
C.C. Janes, J.W. Montgomery
- 84-22 MMT Open and Closed Loop Coalignment Software and Open Loop Phasing Software
(TCS Manual)
J.W. Montgomery
- 84-23 Mount Computer Operator's Manual (Revised, see 86-4)
A.D. Poyner
- 84-24 Instrument Cabling Plan
C.C. Janes

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- 85-1 Operation of the Multiple Mirror Telescope Spectrograph (Revised, see 88-3)
R.J. Weymann, C.B. Foltz, D.B. Ouellette
- 85-2 The IRIS System for the Multiple Mirror Telescope
M.E. Regina
- 85-3 New Top Box
D. Blanco, F. Chaffee, C. Heller, C. Janes, D. Ouellette, A. Poyner, F. Sharp, J. Montgomery,
and J.T. Williams

- 85-4 Progress Report on Using Etalons for Wavelength Calibration
C.B. Foltz, f.H. Chaffee, D.B. Ouellette, and D.R. Blanco
- 85-5 I-CCD and I-VID Camera Control
B. O'Connor
- 85-6 Alignment Requirements for Autoguiding
D. Blanco, C. Janes, L. Vaughn, and J.T. Williams
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- 86-1 Offset Autoguiding with the SAO-CCD
C. Janes and J. Montgomery
- 86-2 Interfacing Instrument Control Computers to Certain Top Box Functions
A. Poyner, F. Sharp, and C. Foltz
- 86-3 Echelle Computer Control and Remote Observing
A. Poyner, C. Foltz, F. Chaffee
- 86-4 Mount Computer Operator's Manual (Revised, see 84-23)
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- 87-1 Reducing MMT Spectrograph Data with IRAF
P. Massey
- 87-2 6.5 M Upgrade Engineering Calculations
D.R. Blanco
- 87-3 Specifying and Holding Collimation Tolerances on Fast Cassegrain Telescopes
D.R. Blanco
- 87-4 User's Guide to the M.M.T.O. Spectrograph Control Programs (Revised, see 88-2)
A.D. Poyner
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- 88-1 Calibration of the MMT Focal Plane Scale
D. Fabricant, J. McClintock, D. Blanco

- 88-2 User's Guide to the MMTO Spectrograph Control Programs - Version 4.1
A.D. Poyner
- 88-3 Operation of the MMT Spectrograph (Version 4) (Revised, see Version 4.1)
C.B. Foltz, D.B. Ouellette
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1989

- 89-1 Phased Geometry for the MMT
D. Blanco
- 89-2 Smoke-Wire Flow Visualization of Flow over a Model of the Multiple Mirror Telescope
B. Marasli
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1992

- 92-1 Coordinate Transformations at the MMTO
A.D. Poyner
- 92-2 Adaptive Optics at the MMT
R. Angel, P. Christophorov, R. Dekany, R. Kupke, M. Lloyd-Hart, B. McLeod, I. Scott-Fleming, T. Trebisky, D. Wittman, P. Wizinowich
- 92-3 "cats" The MMT Catalog Browser
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- 99-1 Meteorological Data for Mt. Hopkins
A. A. E. Milone, C. Heller, J. McAfee
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- 01-1 Baseline Shack Hartmann Design for the 6.5m MMT f/9 Focus
S. C. West, H. Olson
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- 03-1 Fall 2002 F/9 Optical Performance of the 6.5m MMT Analyzed with the Top Box Shack-Hartmann Wavefront Sensor
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- 03-2 Test Report for MMT F/5 Secondary Mirror
Steward Observatory Mirror Lab
- 03-3 Status of Pointing of the 6.5 m MMT
T. Trebisky, C. Foltz, S. West
- 03-4 Modifications to the f/9 Secondary Mirror Hardpoints
S. C. West, S. P. Callahan, R. James, D. Clark, C. Wainwright, K. Van Horn
- 03-5 Segmented Zero-Deviation Cross-Dispersion Prisms for the Hectochelle Multiobject Spectrograph
D. G. Fabricant, A. Szentgyorgyi, H. W. Epps
- 03-6 F/9 Top-Box Shack-Hartmann: Practical Design and Implementation
S. C. West, S. P. Callahan, R. James, P. Spencer, H. Olson, B. Kindred, R. Ortiz, T. Pickering
- 03-7 Evaluation of Thermal Performance for the MMT Primary Mirror During January 2003
J. D. Gibson